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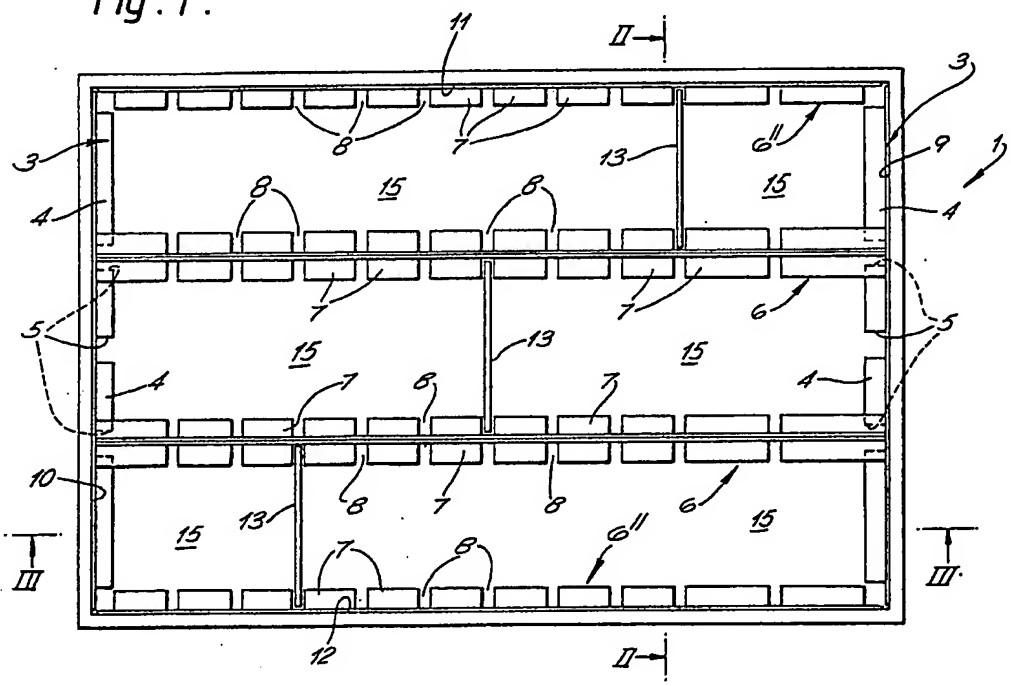
(71) Applicant A. Marshall & Sons (Office Equipment Limited) (United Kingdom), Blue Line House, Thames Road, Barking, Essex TG11 0MS
(72) Inventor James John Gardner
(74) Agent and/or Address for Service Forrester, Ketley & Co., Forrester House, 52 Bounds Green Road, London N11 2EY

(54) A drawer divider

(57) A drawer divider comprises two elongate support members (3), each having a longitudinal channel-shaped portion formed with a plurality of apertures (5), and one or more rails (6), the or each rail being received and located between apertures (5) of said support members. The or each rail also has a longitudinal channel-shaped portion (7) formed with a plurality of apertures (8) for receiving edges of divider plates (13). The support members (3) are secured to respective walls (9 and 10) of the drawer and two edge rails (6'') are secured to respective walls (11 and 12) of the drawer (1). In a second embodiment the support members and rails which are secured to the drawer walls, are constructed from similarly slotted channel sections. The rail(s) (6) may have a downwardly extending portion which serves to partition the drawer.

Fig. 1.



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The drawings originally filed were informal and the print here reproduced is taken from a later filed formal copy.

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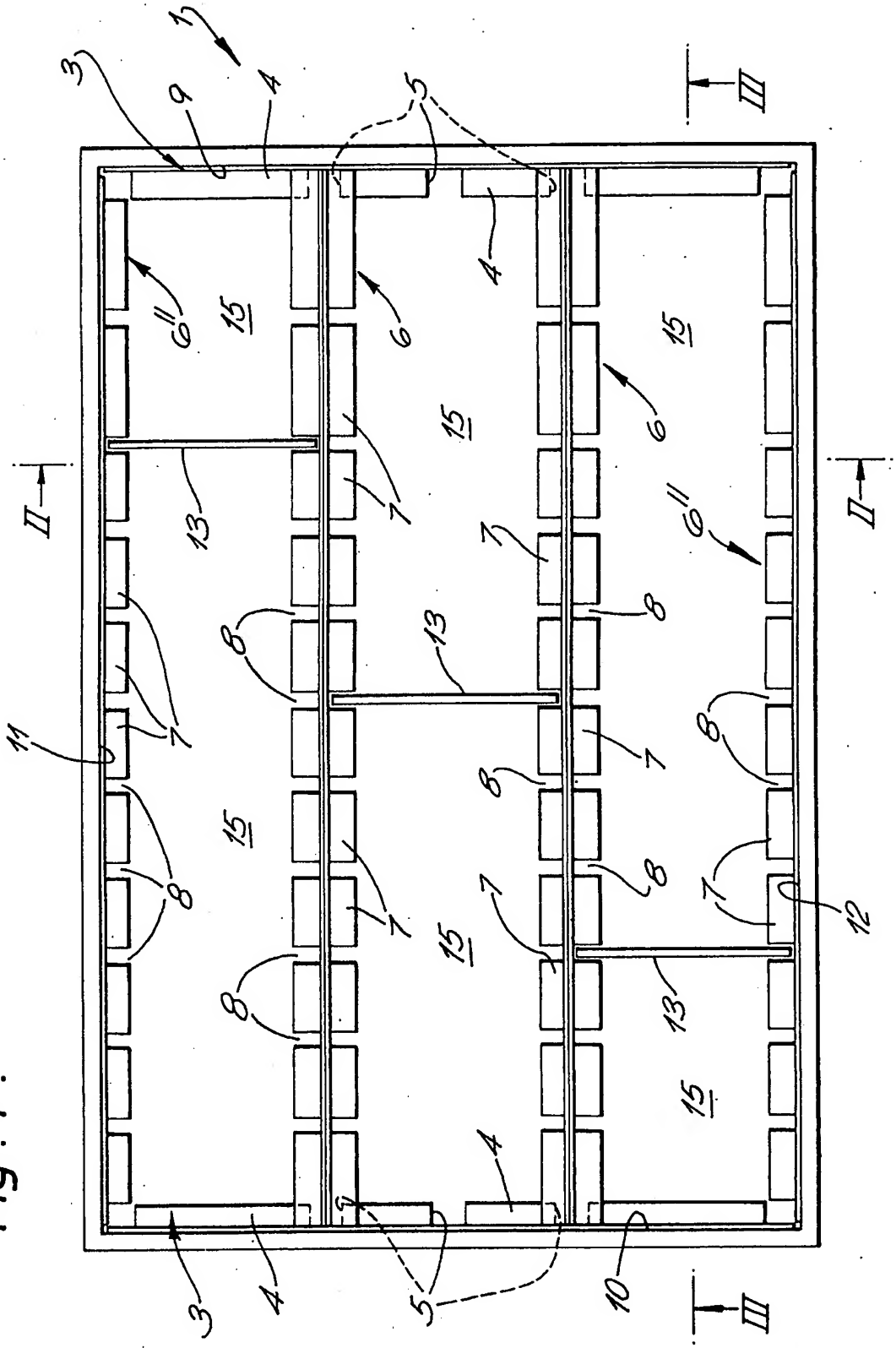

Fig. 1.

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Fig. 2.

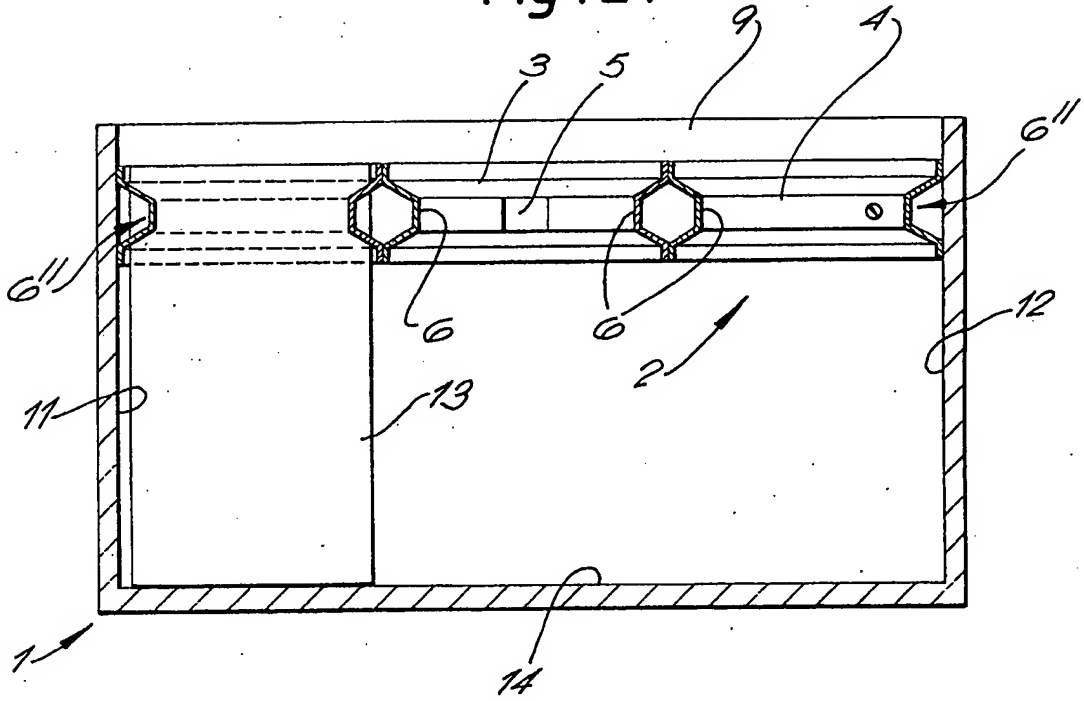

Fig. 3.

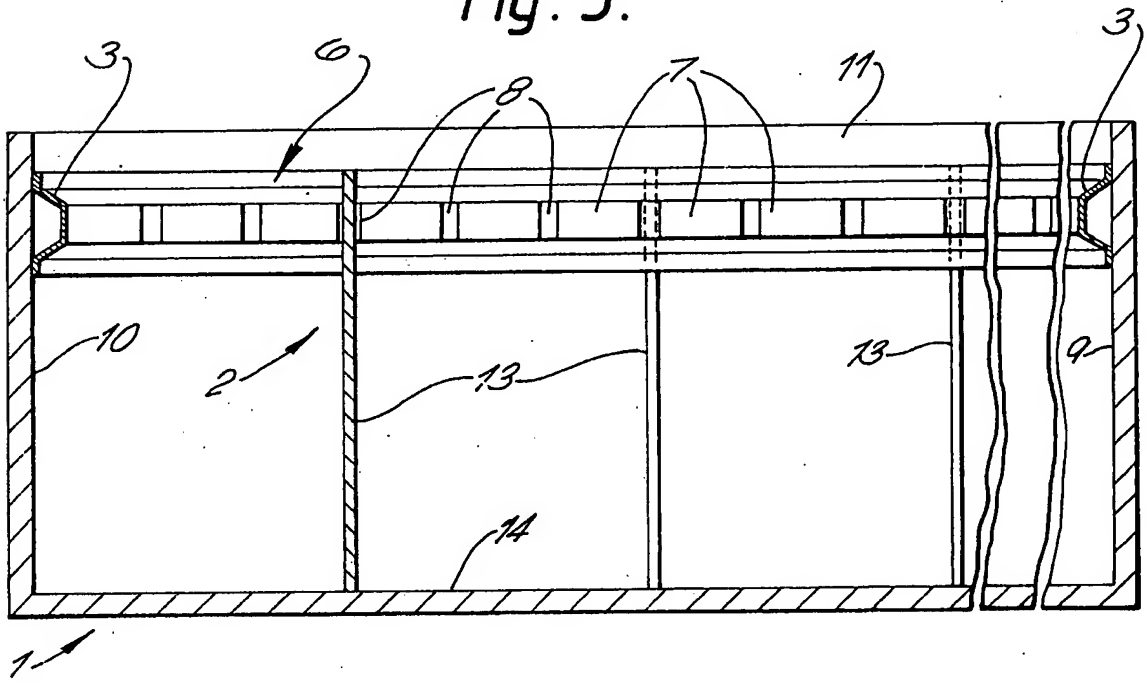

Fig. 4.

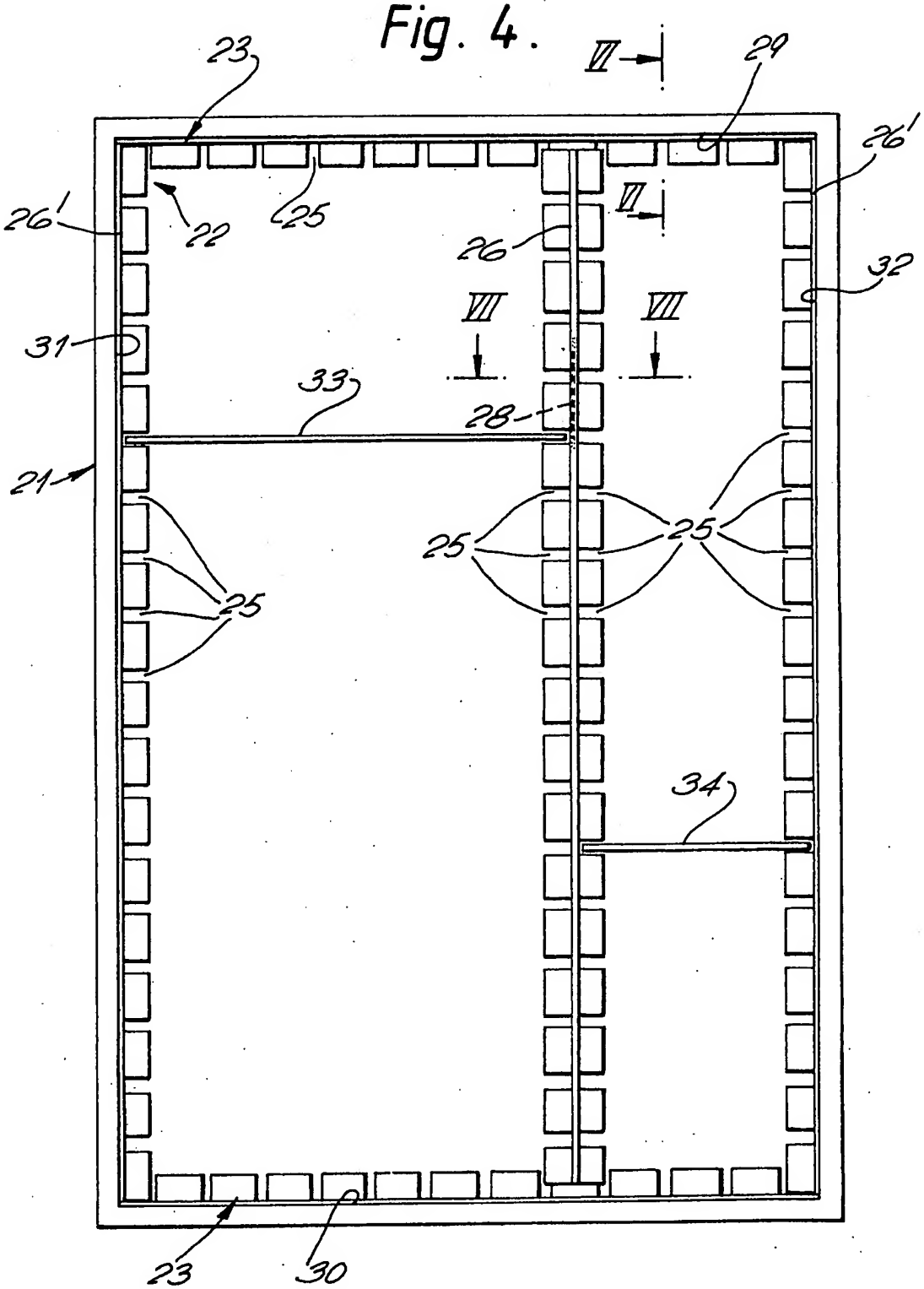

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Fig. 5.

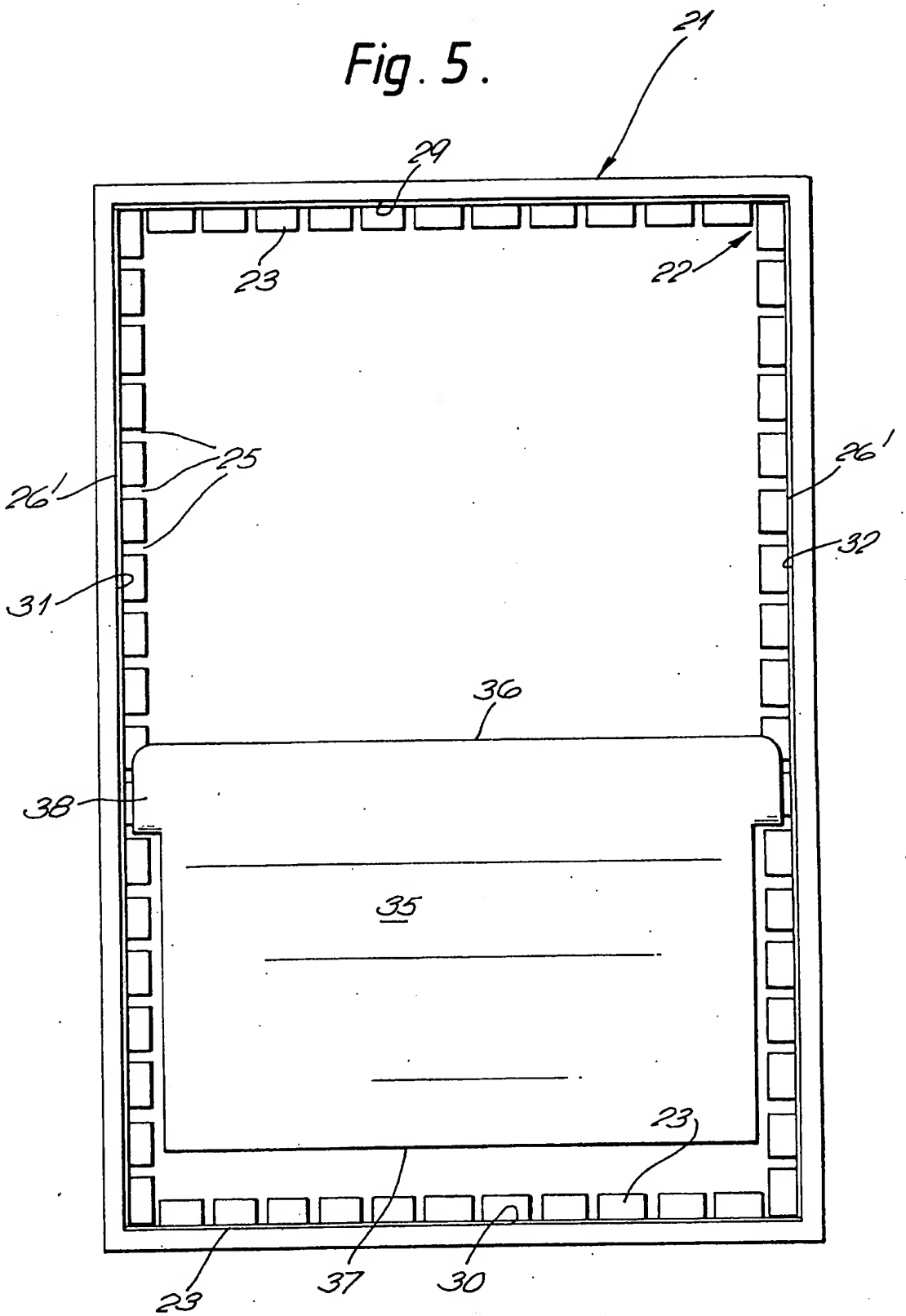


Fig. 7.

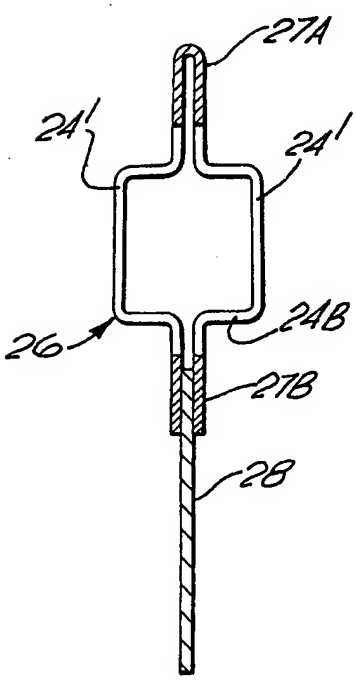


Fig. 8.

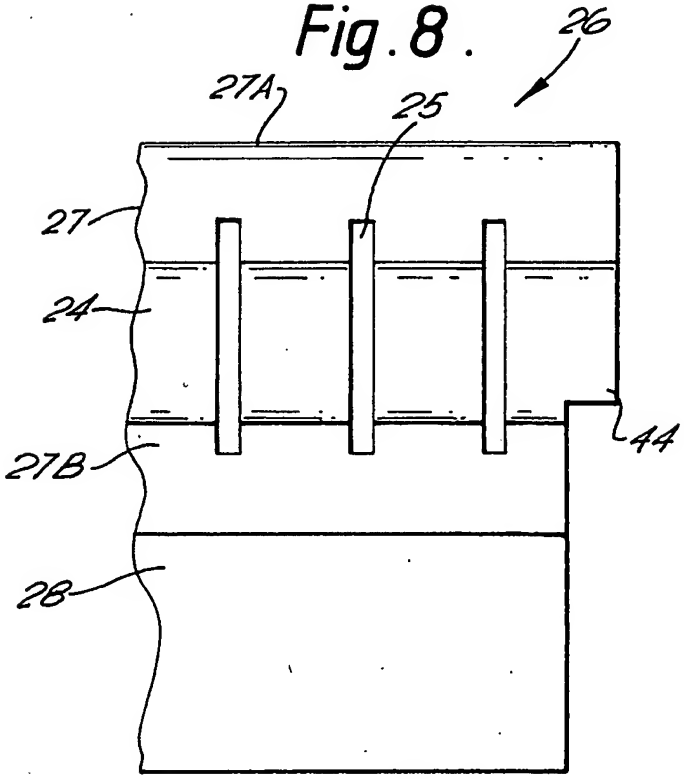


Fig. 6.

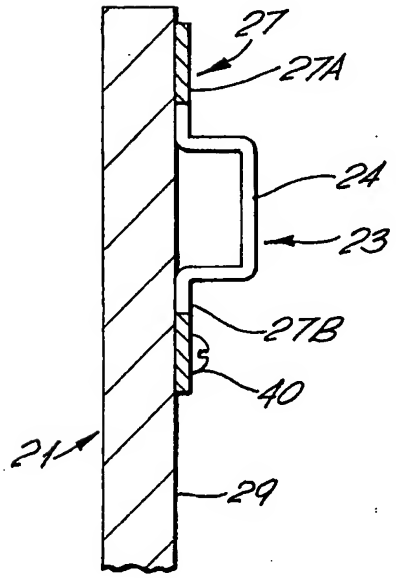
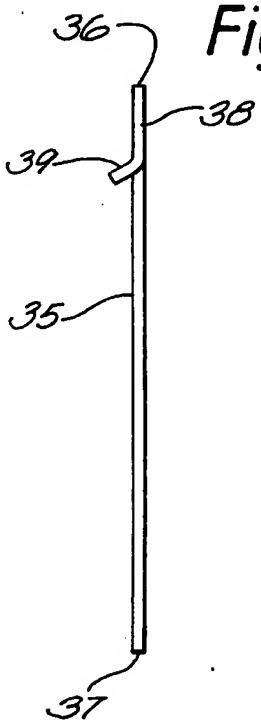


Fig. 9.



SPECIFICATION
A drawer divider

This invention relates to a drawer divider.

It is often desired to divide up the space within a drawer of an item of furniture into a number of compartments of adjustable size.

In one known divider arrangement, two opposite side walls of the drawer are provided internally with a series of vertical grooves therealong and at least one partition wall, which is similarly grooved on both sides, is fixed in the drawer parallel to the grooved side walls. Divider plates are provided to engage in selected pairs of corresponding opposing slots of the side walls and partition walls so as to divide up the drawer into compartments of desired size.

This known arrangement has the disadvantage that the side walls of the drawer have to be provided with grooves during manufacture and it is impossible therefore to offer drawer division as an optional extra. The drawer is also provided with fixed partition walls parallel to the grooved side walls, so that the dimensions of the compartments at right angles to the grooved side walls cannot be varied by the user in the known drawer.

It is an object of the invention to provide an improved and more adaptable means of dividing up a drawer.

According to one aspect of the present invention, there is provided a drawer divider comprising a plurality of rails, each rail being releasably mountable in a drawer, and a plurality of divider plates, each rail having a plurality of divider plate engaging means and each plate being receivable between respective engaging means of a first and a second rail.

Preferably, the divider comprises at least three rails, at least one rail having a respective plurality of divider plate engaging means formed on each of a pair of opposed elongate surfaces thereof.

In an embodiment of the invention, two elongate support members are provided, each support member being formed with a plurality of rail engaging means each rail engaging means being arranged to receive a respective end of a rail.

Suitably, each elongate support member has a central channel member extending along the length thereof, each rail engaging means being formed in the central channel member of the support member and, conveniently, each rail engaging means comprises a rail engaging aperture.

According to another aspect of the present invention, there is provided a drawer incorporating a drawer divider, the drawer comprising first and second elongate support members secured to extend along respective ones of a first pair of opposed interior walls of the drawer, a plurality of rails and a plurality of divider plates, each elongate support member being formed with a plurality of rail engaging means, each rail engaging means being arranged releasably to engage a respective end of a rail and each rail being formed with a plurality of divider plate engaging means, each divider plate being receivable between respective engaging means of a first and second rail.

In one arrangement embodying the invention, a respective rail of the plurality of rails is secured to each of the other pair of opposed interior surfaces of the drawer to form a pair of edge rails each extending along a respective one of the other pair of opposed surfaces and generally, each rail not forming an edge rail has a respective plurality of divider plate engaging means formed on each of a pair of opposed elongate surfaces thereof.

Conveniently, the or each plurality of divider plate engaging means of a rail is formed in a or a respective central channel member extending along the length of an elongate surface or a respective one of a pair of opposed elongate surfaces of the rail and usually, each divider plate engaging means comprises a divider plate engaging aperture.

In a preferred embodiment of the invention, the divider plate engaging means of the rails and the rail engaging means of the support members are of the same form. More particularly, both the rails and the support members may be provided with a central channel member in which is cut a series of slots extending transversely to the length of the channel, the slots being so dimensioned and spaced that each slot can serve as a divider plate engaging means and pairs of the slots can serve as rail engaging means. Conveniently, a pair of adjacent slots constitutes a rail engaging means.

In this preferred form of the invention, both the rails and the support members can be constructed using the same slotted channel section, thereby reducing the costs whilst, at the same time, increasing the versatility of the divider arrangement.

In order that the invention may be readily understood, an embodiment thereof will now be described, by way of example, with reference to the accompanying drawings in which:

FIGURE 1 is a plan view from above of a drawer incorporating a drawer divider embodying the invention;

FIGURE 2 is a cross-sectional view of the drawer of Figure 1 taken along the line II—II in Figure 1;

FIGURE 3 is a cross-sectional view of the drawer of Figure 1 taken along the line III—III in Figure 1;

FIGURE 4 is a plan view from above of a drawer incorporating a drawer divider according to a second embodiment of the invention and showing a plurality of divider plates installed in the drawer;

FIGURE 5 is a plan view from above of a drawer incorporating a drawer divider according to the second embodiment and showing an inclined divider plate installed in the drawer;

FIGURE 6 is a fragmentary cross-sectional view of a support member mounted on a wall of the drawer of Figure 4, taken along the line VI—VI of Figure 4;

FIGURE 7 is a fragmentary cross-sectional view of a central rail mounted between a pair of support

members in the drawer of Figure 4, taken along the line VII—VII of Figure 4;

FIGURE 8 is a fragmentary side elevational view of an end portion of the central rail shown in section in Figure 7; and

FIGURE 9 is an edge view of the inclined divider plate shown in Figure 5.

Referring to Figures 1 to 3 of the drawings, there is shown a drawer 1 incorporating a drawer divider 2 embodying the invention.

The divider 2 comprises two elongate support members 3. Each support member 3 is bent or moulded so as to have a central channel member 4 of substantially U-shaped cross-section extending along the length of the support member 3.

A plurality of apertures 5 are formed in each support member 3 spaced apart along the length of the channel member 4 of the support member 3 and extending transversely of the channel member 4. Each aperture 5 is arranged to engage an end of one of a plurality of rails 6 so that each rail 6 extends between the support members 3. As shown in Figures 1 to 4, the support members 3 are arranged substantially parallel to one another and the rails 6 extend transversely thereof. Two of the plurality of rails 6 form edge rails defining the boundary of the divider. Each edge rail is in the form of an elongate member 6" having a central channel member 7 of substantially U-shaped cross-section extending along the length thereof. A plurality of apertures 8 are formed transversely of each channel member 7. Each remaining rail 6 is formed by two of the elongate members 6" joined back to back, for example by screws or welding, so that a plurality of apertures 8 are formed on each of two opposed elongate surfaces of the remaining rails 6.

In the arrangement shown, the support members 3 and edge rails 6' are secured to respective interior surfaces 9, 10, 11 and 12 of the drawer 1 by, for example, screws. However, the edge rails 6' could of course be received in apertures formed in the support members 3 in the same manner as the remaining rails 6 and the support members 3 and edge rails 6' could be provided with support means contacting a base 14 of the drawer 1 to ensure that the divider was retained at the desired height in the drawer. With such an arrangement, the divider could be assembled before placement in the drawer 1.

The divider also comprises a plurality of divider plates 13. Each divider plate 13 is arranged to be received between a pair of rails 6 so that opposite edges of the divider plate engage opposing apertures 8 to divide the drawer into compartments 15.

Of course, the number of apertures 8 and 4 will be determined by the particular requirements of a user and clearly, the divider plates 13 and rails 6 can be moved whenever desired to alter the relative sizes of the compartments 15. In the arrangement shown, three plates 13 and four rails 6 provided. However, the number of plates and rails can be varied as desired.

Figures 4 to 9 illustrate a drawer 21 fitted with a second embodiment of drawer divider 22 according to the invention. The divider 22 comprises two support members 23 and a plurality of rails 26. The support members 23 are secured to respective interior surfaces 29 and 30 of one pair of parallel side walls of the drawer and two edge rails 26' are secured to the interior surfaces 31 and 32 of the other pair of parallel side walls of the drawer.

The support members 23 and the edge rails 26' are of the same form, being constructed from an elongate section 27 bent or moulded so as to have, as shown in Figure 6, a central channel member 24 of substantially U-shaped cross-section flanked by upper and lower flanges 27A and 27B. The member 23 or rail 26' may be conveniently secured to its respective drawer side wall by screws 40 passing through mounting holes provided at intervals along the lower flange 24B. A series of vertical slots 25 is formed along the channel member 24, the spacing of the slots being the same for both the members 23 and the rails 26'.

Each central rail 26 is detachably mounted in the drawer by engaging the ends of the rail with the slotted support members or other rails 26, 26' already secured or mounted in the drawer. As shown in Figures 7 and 8, the central rail 26 of Figure 4 is formed by two lengths of the channel section 27 joined back-to-back with a rectangular plate 28 interposed between the lower flanges 27B so as to form a downwardly depending partition wall adapted to extend to the bottom of the drawer when the rail 26 is mounted in the drawer. If desired, the plate 28 could, of course, be omitted. The spacing of the slots 25 in the channel section 27 is substantially equal to the spacing between the floors 24' of the back-to-back channel members 24 of the central rail 26 and a step is cut in each end of the rail 26 so as to remove an end portion of the plate 28, lower flange 27B and lower side wall 24B of the channel 24. This leaves a pair of vertical tabs 44, constituted by end portions of the channel floors 24', at each end of the rail 26 for engagement in a selected adjacent pair of slots 25 on another rail or support member. This means that the position of the rails 26 can be selected or adjusted with great freedom. Of course, still finer adjustment could be achieved by making the spacing of the slots 25 equal to a suitable submultiple of the spacing between the floors 24'.

The space within the drawer 21 may be divided up in a multitude of ways within the framework provided by the support members 23 and edge rails 26'. Figure 4 shows one example using a single central rails 26 engaged between the support members 23 and two divider plates 33 and 34 of different lengths, each having end portions thereof engaged in respective slots in the central rail 26 and a side rail 26'. In fact it is envisaged that a series of divider plates of different lengths would be provided to allow for the different spacings at which central rails 26

could be mounted in the drawer.

Figures 5 and 9 illustrate another component 35 which can be used with the drawer divider 22. Component 35 is a divider plate that may be used to provide an inclined surface within the drawer or within a compartment of the divided drawer. In the example illustrated in Figure 5, the plate 35 provides an inclined surface extending over substantially half the drawer and inclining downwardly from an upper edge 36 at the centre of the drawer to a lower edge 37 adjacent the wall surface 30 of the drawer. As shown in Figure 9, an enlarged end region 38 of the plate 35 is provided with two integral tabs 39 bent out of the plane of the plate and adapted to engage in corresponding slots 25 of the opposite edge rails 26' to support the plate 35 in its inclined position.

Preferably, the support members, rails and the divider plates are formed of metal, such as aluminium, although other materials, such as a suitable plastics material, could be used.

CLAIMS

1. A drawer divider comprising a plurality of rails, each rail being releasably mountable in a drawer, and a plurality of divider plates, each rail having a plurality of divider plate engaging means and each plate being rceivable between respective engaging means of a first and a second rail.

2. A divider according to claim 1, comprising at least three rails, at least one rail having a respective plurality of divider plate engaging means formed on each of a pair of opposed elongate surfaces thereof.

3. A divider according to claim 1 or 2, wherein the or each plurality of divider plate engaging means of a rail is formed in a or a respective central channel member extending along the length of an elongate surface or a respective one of a pair of opposed elongate surfaces of the rail.

4. A divider according to any preceding claim, wherein each divider plate engaging means comprises a divider plate engaging aperture.

5. A divider according to any preceding claim, further comprising two elongate support members, each support member being formed with a plurality of rail engaging means, each rail engaging means being arranged to receive a respective end of a rail.

6. A divider according to claim 5, wherein each elongate support member has a central channel member extending along the length thereof, each rail engaging means being formed in the central channel member of the support member.

7. A divider according to claim 5 or 6, wherein each rail engaging means comprises a rail engaging aperture.

8. A divider according to claim 5 or 6, wherein the divider plate engaging means of the support members are of the same form.

9. A divider according to claim 8, wherein both the rails and the support members are provided with a central channel member in which is cut a series of slots extending transversely of the length of the channel, the slots being so dimensioned and spaced that each slot can serve as a divider plate engaging means and pairs of the slots can serve as rail engaging means.

10. A divider according to claim 9, wherein a pair of adjacent slots in the channel constitutes a rail engaging means.

11. A drawer divider substantially as hereinbefore described with reference to and as illustrated in Figures 1 to 3 or Figures 4 to 9 of the accompanying drawings.

12. A drawer incorporating a drawer divider in accordance with any one of claims 1 to 10.

13. A drawer incorporating a drawer divider, the drawer comprising first and second support members secured to extend along respective ones of a first pair of opposed elongate interior walls of the drawer a plurality of rails and a plurality of divider plates, each elongate support member being formed with a plurality of rail engaging means, each rail engaging means being arranged releasably to engage a respective end of a rail and each rail being formed with a plurality of divider plate engaging means, each divider plate being receivable between respective engaging means of a first and second rail.

14. A drawer according to claim 13, wherein a respective rail of the plurality of rails is secured to each of the other pair of opposed elongate interior surfaces of the drawer to form a pair of edge rails each extending along a respective one of the other pair of opposed surfaces.

15. A drawer according to claim 14, wherein each rail not forming an edge rail has a respective plurality of divider plate engaging means formed on each of a pair of opposed elongate surfaces thereof.

16. A drawer according to claim 15, wherein the or each plurality of divider plate engaging means of a rail is formed in a or a respective central channel member extending along the length of an elongate surface or a respective one of a pair of opposed elongate surfaces of the rail.

17. A drawer according to any one of claims 13 to 16, wherein each elongate support member has a central member extending along the length thereof, each engaging means being formed in the central channel member of the support member.

18. A drawer according to any one of claims 13 to 17 wherein each rail or plate engaging means comprises an aperture.

19. A drawer according to any one of claims 13 to 17, wherein the divider plate engaging means of the support members are of the same form.

20. A divider according to claim 19, wherein both the rails and the support members are provided with a central channel member in which is cut a series of slots extending transversely of the length of the channel, the slots being so dimensioned and spaced that each slot can serve as a divider plate engaging means and pairs of the slots can serve as rail engaging means.

21. A divider according to claim 20, wherein a pair of adjacent slots in the channel constitutes a rail engaging means.

22. A drawer incorporating a drawer divider in

accordance with claim 13 substantially as hereinbefore described with reference to and as illustrated in Figures 1 to 3 or Figures 4 to 9 of the accompanying drawings.

23. Any novel feature or combination of features described herein.

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